

**REMARKS**

Reconsideration and allowance of the above-referenced application are respectfully requested.

**I. STATUS OF THE CLAIMS**

Claims 43 and 44 are amended herein.

Claims 2-21 and 23-42 are allowed.

In view of the above, it is respectfully submitted that claims 2-21 and 23-44 are currently pending and under consideration.

**II. REJECTION OF CLAIMS 43 AND 44 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH**

Claims 43 and 44 are rejected under 35 U.S.C. § 112, first paragraph. Claims 43 and 44 are amended herein to overcome the rejection.

In view of the above, it is respectfully submitted that the rejection is overcome.

**III. REJECTION OF CLAIMS 43 AND 44 UNDER 35 U.S.C. § 103(A) AS BEING ANTICIPATED BY UDD (US 5,455,698) IN VIEW OF ROBERTS (US 6,031,647)**

Claim 43 (as amended herein) relates to an optical sender comprising, "a shut-down device shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside the optical sender." Accordingly, it is possible to shut down the optical signal when a light source keeps outputting a light beam because the shut-down device shuts down the optical signal by switching the operating point of the optical modulator and shutting down the input of the main signal into the optical modulator.

Udd discloses "[i]f the threshold of the alarm system is exceeded, a signal is sent to the light source controller 2533 that shuts down the light source 2507" (see column 20, lines 15-17). Thus, Udd discloses shutting down the light source 2507.

However, Udd fails to disclose shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator. Accordingly, Udd fails to disclose the features recited in the amended claim 43.

Roberts discloses a stable power control for optical transmission systems. Moreover, Roberts teaches that attenuators 23, 24 may act as damping elements to damp a change in output power. For example, if the transmitter 21 is switched off, the attenuator 23 can be controlled so as to gradually reduce the output signal power (see column 5, lines 30-38). When transmitter 21 is switched on, attenuator 24 can be controlled so as to reduce the power output of the signal originated from transmitter 22.

Roberts, however, is fundamentally different from the present invention. That is, Roberts is concerned with reducing the power level or output power signal output from the transmitter 21, which can be achieved by using the attenuators 23, 24. Thus, Roberts fails to disclose the features recited in the amended claim 43.

It is respectfully submitted that Udd and Roberts, either alone or in combination, do not teach "a shut-down device shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside the optical sender" (see claim 43).

Claim 44 (as amended herein) recites similar features as claim 43, particularly a method comprising "shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside an optical sender." Like claim 43, claim 44 recites features that are patentably distinguishing over Udd and Roberts.

In view of the above, it is respectfully submitted that the rejection is overcome.

**IV. REJECTION OF CLAIMS 43 AND 44 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER MIYAZAKI ET AL. (US 6,040,931) IN VIEW OF MIYACHI ET AL. (US 5,920,414), AND FURTHER IN VIEW OF ROBERTS (US 6,031,647)**

Miyazaki discloses a shut-off unit 26 shutting off the optical signal in case the monitored parameter does not satisfy the predetermined condition (see column 4, lines 38-42), a shut-down circuit 130 controlling the supply of a driving current to the laser diodes 30 from a driving unit 32 in accordance with a signal output by the judgment unit 24 (see column 8, lines 64-67), and a shut-down circuit 130 controlling a driving unit 32 so that the driving unit 2 reduces the magnitude of the driving current supplied to a laser diodes 30 (see column 9, lines 9-12). Thus,

Miyazaki discloses shutting down the light-source unit 20 or the laser diode 30 in accordance with a signal output by the judgment unit 24.

Miyazaki, however, fails to disclose shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator. Thus, Miyazaki fails to disclose the features recited in the amended claim 43.

Like Miyazaki, Miyachi fails to disclose the features recited in claim 43. That is, nothing in Miyachi discloses “a shut-down device shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside the optical sender” (see claim 43).

Thus, it is submitted that Miyazaki and Miyachi, either alone or in combination, do not teach the features as recited in claim 43.

Claim 44 (as amended herein) recites similar features as claim 43, particularly a method comprising “shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside an optical sender.” Like claim 43, claim 44 recites features that are patentably distinguishing over Miyazaki and Miyachi.

In view of the above, it is respectfully submitted that the rejection is overcome.

## **VI. CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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